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REFLECTIONS
on the
PROPRIETY OF PERFORMING THE
CÆSAREAN OPERATION:

to which are added,
OBSERVATIONS ON CANCER;

and,
EXPERIMENTS
on the
SUPPOSED ORIGIN OF THE
COW-POX.

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TO

JOHN FERRIAR, M. D.

Dear Sir,

In prefixing even the ornament of your name to this little work, I can scarcely hope that its faults will be skreened from public censure: whatever the fate of it shall be, I am happy in the opportunity thus afforded me of subscribing myself,

Dear Sir,

Your friend,

and faithful servant,

The AUTHOR.

Falkner-street,

December 12, 1798.

Differre quoque pro natura locorum, genera medicinæ, et aliud opus
esse Romæ, aliud in Ægypto, aliud in Gallia.


Celsus Lib. I. præf. pag. 8.



REFLECTIONS

on the

*Propriety of performing the Cæsarean
Operation.*



THE Cæsarean section or operation has been a subject of discussion among medical men for the two last centuries, first upon the Continent, and afterwards in this country. The result of their experience has been strikingly different, for while it is said to have been practised with success in other nations on the Continent of Europe, it has proved fatal in England in every instance. This singular difference in the event of an operation is unparallel'd in any other case, and unless climate be admitted to have great influence, no sufficient cause has been yet assigned. However inexpli-

cable the subject may be, the intelligent practitioner will be governed by the fact, and will not hazard the life of his patient on theoretical grounds. Impressed with these sentiments I have been induced, by a late occurrence, to reexamine the subject, and to lay the result of my inquiry before the public, to prevent as far as my influence shall extend, the revival of an operation that has proved so fatal to my countrywomen.

The Cæsarean operation, it has been asserted, derived its distinctive appellation from Julius Cæsar, but I apprehend on no sufficient authority ; an event so extraordinary would doubtless have been carefully recorded, and Suetonius mentions that Cæsar's mother was living when he invaded Britain.

Pliny informs us that Scipio Africanus was extracted by the Cæsarian section, after the death of his mother, and that he was the first called Cæsar “ a cæso matris utero .”

The title has been given to others, and among the rest to our Edward the sixth, but it appears to have been unmerited by him, his mother Queen Jane Seymour being safely delivered, although she lived only twelve days after her delivery.*

* Henry Histor. England, vol. vi. pag. 231.

Hippocrates, who practised medicine in the fifth century before the Christian Æra is silent on this operation. His directions are few but judicious on the management of labours. Considering the head as the only natural presentation, when any other part presented, he directs it to be returned, and the head to be brought down “ ut prodeat secundum naturam.” When the child was dead, and the head presenting could not be delivered by the pains, he orders it to be opened and the bones of the cranium to be picked away with forceps or the crotchet; and when further resistance is made from the swelling of the body, he directs to lessen it, by cautiously introducing a sharp curved instrument affixed to the larger finger,* and guarded so as not to injure the mother, and then to extract it piecemeal with the embryulus. If the hand or foot presented and could not be returned, he directs it to be amputated, and the head to be brought down; should this attempt fail, recourse to be had to the division of the parts and then to the crotchet.†

* The ring-scalpel described and delineated by Dr. Simson, in the fifth volume of the Edinburgh Medical Essays, is ingeniously contrived on the idea of Hippocrates; but, if the hand can be introduced into the womb, to apply it as he directs, modern practice will furnish better means of assistance. Tertullian uses the very expression *annulus cultratus*. Lib. de anima, cap. 25.

† Lib. I. de morb. mulier, sect. v. & de superfœtation.

Celsus, who lived in the first century of the Christian Æra, copies Hippocrates, but is more full on the subject than his predecessor. In his chapter on the extraction of the dead fœtus, he deviates however in one very material point, namely, in bringing down the feet when near at hand, or when one presented, or when it was necessary to turn, instead of pushing them back to make it a head-presentation.* This was unquestionably a very great improvement, (for I have not met with any mention of it in the writings of Hippocrates) as it is well known that such a presentation requires on that account, no material deviation from the treatment of a natural labour. They had but few resources in those times for saving the child or hastening delivery; when any difficulty or delay presented, change of posture, succussion, and the endeavour to bring down the head, when not presenting, or the feet, according to Celsus, for I am willing to extend his practice to the living fœtus,† seem to be the whole of their scanty catalogue, and with some few medical directions, of very doubtful propriety, this short sketch com-

* Lib. vii. cap. 29. Fœtus mort. educt.

† Whether turning and extracting by the feet had been occasionally practised, during the life of the child, on the presentation of certain difficulties, does not now appear; but the doctrine of turning and delivering by the feet was first publicly taught by Paré.

prehends their practice, as far as concerns the birth of the child.

It must not however be forgotten, that in the dark period of the ninth century, Rhazes, an Arabian, discovered the fillet; and that Avicenna, his countryman, who lived in the tenth century, when he could not apply the fillet over the head, used forceps with the intention of saving the child. I believe he is the first who used forceps with that intention; the horrid instruments of that name formerly in use, and those afterwards delineated by Albucasis, being intended to squeeze the head into a smaller space.

The right understanding of the economy of a natural labour constitutes the basis of manual assistance. Practitioners had little opportunity of becoming acquainted with it in former times, from the practice being confined to women, except in difficult cases, when it was exercised as a branch of operative surgery. And every allowance should be made for their ignorance of anatomy, the structure of the pelvis having been imperfectly known, until described by Vesalius.

Towards the close of the sixteenth century, midwifery seems to have claimed more attention on the Continent, and to have partaken of the

benefits derived from the spirit of inquiry then arising, and of the humane direction of public opinion. About this period the Hotel Dieu was opened in Paris, for the reception of poor women with child, who were destitute of necessaries, which affording ample opportunity for observation, in due time extended its advantages beyond the limits of its own walls, and became a source of improvement in the practice of the art.

insly Near the end of that century, Rousset published a treatise on the Cæsarean Operation. He was probably incited by the desire of preserving the child in those cases, in which it had before been necessary to have recourse to the crotchet. Whatever his motives were he is a warm advocate for the operation, and recommends that it should be done early, whilst the mother and child are yet in vigour. The cases he details are sufficiently numerous to warrant his recommendation, had they been collected on less exceptionable testimony; but, I think, he gives only one on his own authority;* and others are drawn from a correspondence of little weight, as hearsay or the rumours of the ignorant. By his recommending it to be performed early, the preservation of the child seems to have been a main object. In several of his cases, however, as in

* Gynæc. Comment. a Spachio, hist. 2. pag. 150.

the third and sixth, a putrid fœtus was extracted. The mother was unnecessarily exposed to extreme hazard in others, for when a child could be born by a natural labour the Cæsarean section must be unjustifiable; and yet in the case he testifies the mother had a natural birth a year and a half after; and in the fifth and sixth histories, he mentions the like to have happened. Yet the work appears to have had considerable reputation, from Caspar Bauhin taking the trouble to translate it into latin from the original French, and adding an appendix of his own.' How high soever its repute might have been with some, the practice met with considerable opposition from others, for Rousset himself tells us, that the physicians and surgeons of his time declined performing this operation, and that in most of his cases a barber-surgeon (tonsor) was the operator. There were however some exceptions. Although surgery was in a rude state at that period, even in France, I cannot persuade myself that this operation would have been generally consigned to such hands with so many instances of success. A fondness for the marvellous is prominent in many of his histories, and in none more than in the case communicated by his friend Villanova, who writes that he never knew a patient recover on whom the operation had been performed by an incision in the side (the usual way) but, in the case he relates, he

accomplished the delivery by applying the actual cautery, so as to penetrate through the abdominal muscles and uterus. It must be observed that his patient afterwards bore children.*

In the appendix Bauhin has given the case of the sow-gelder of Sigershausen, who performed the Cæsarean section on his own wife. The history mentions that she had been in labour some days, and notwithstanding she had thirteen midwives and several Lithotomists to attend her, could not be delivered. He therefore determined on this operation, and dismissing all the attendants, except those necessary to assist him—he proceeded—Bauhin's words are—"Quare maritus implorato primum divino auxilio, et janua diligenter clausa, Uxorem mensæ imponit, abdomini vulnus (*non secus quam porco*) infligit. Verum primo ictu ita feliciter abdomen aperuit, ut subito infans absque ulla læsione extractus fuerit."† I am inclined to think from the expressions that this was a case of extra-uterine fœtus. She lay in afterwards five times, first of twins and then of four single births. Several of his cases besides strike me as being extra-uterine, which would make a very essential difference in the consequences to be apprehended from the operation; and I must candidly confess

* Hist. 3. part v. sect. iv.

† Appendix, hist. 1. pag. 480.

my doubts whether it was ever performed in others, they are given on such indifferent testimony, and are related with circumstances so improbable. Those who will take the trouble of reading his cases, and particularly his chapter on diseases of the womb, will scarcely question his facility of belief; and it is less marvellous that there should be some deception or mistake, than that the laws of the female constitution should be so materially changed.

I mentioned above that there were exceptions to Rousset's operators, for the operation was performed by Guillemeau, in the presence of Parey, and others, but it proved fatal. Guillemeau made a second unsuccessful attempt, and was then so affected by the event, that, to make atonement for his offence, he wrote against the operation, like an able and conscientious man, to warn others against a like error. Lest serious argument should fail of its due effect, Marchant, surgeon to the King, attacked it in several satirical poems, the third of which he entitled "*Tumulus Cæsarei partus.*"

Ambrose Parey, who has been stiled the restorer and improver of midwifery, and who practised as a surgeon in Paris, for many years, with

extraordinary réputation and success—speaking of this operation, says—" I cannot sufficiently marvail at the insolencie of those that affirm that they have seen women whose bellies and womb have been more than once cut, and the infant taken out, when it could no otherwise bee gotten forth, and yet notwithstanding alive ; which thing there is no man can persuade mee can bee done, ✕ without the death of the mother, by reason of the necessarie greatness of the wound that must be made in the muscles of the bellie, and substance of the womb, for the womb of a woman that is great with child by reason that it swelleth and is distended with much blood, must needs yield a great flux of blood, which of necessitie must be mortal. And to conclude, when that the wound or incision of the womb is cicatrized, it will not suffer the womb to be dilated or extended to receiv or bear a new birth. For these and such like other causses, this kind of cure, as desperate and dangerous, is not (in mine opinion) to be used."* The present improved state of medical science will furnish objections against Parey's reasoning, whether they be conclusive or not ; but it is evident a successful case had not come within the scope of his observation. Indeed several writers mention that he was so ashamed of having been present at the operation with Guillemeau,

* Parey's works, by Johnson, b. 24. c. 31. pag. 619.

It is curious enough that Parey immediately after this operation should go on to relate a case of successful mean operation, which he says, he cannot and dares not believe. Why did not Mr. Simmons insert, or make

by which his sanction was apparently given, that he forbore to mention it, and contents himself with reprobating it in general terms. And Ludovicus Mercatus, physician to Philip II. III. of Spain, calls it an *unchristian undertaking*.

In the early part of the sixteenth century, physic and surgery, and all the branches of the healing art were in a very rude state in this country. This will be learnt from an Act of Parliament passed A. D. 1511: "The science and cunning of physic and surgery (to the perfect knowledge whereof be requisite both great learning and ripe experience) is daily within this realm exercised by a great multitude of ignorant persons, of whom the greater part have no insight in the same, nor in any other kind of learning; some also ken no letters on the book; so far forth that common artificers, as smiths, weavers, and women, boldly and accustomably take upon them great cures, and things of great difficulty, in which they partly use sorcery and witchcraft, partly apply such medicines unto the disease as be very noious, and nothing meet therefor, to the high displeasure of God, great infamy to the faculty, and the grievous hurt, damage, and destruction of many of the King's liege people, most especially of them that cannot discern the uncunning from the cunning."*

* Stat. 3. Henry 8. chap. 11.

In 1540, a book was published called the “Byrth of mankynd, or the woman’s book,” which went through many editions, and as there appears to be no other book of equal value published about that time, it may be considered as having been the popular work for near one hundred years; that is till the year 1634, when all the works of Ambrose Parey were translated into one volume.*

On a subject so very important where speculation must be abandoned, and the conduct must be directed by the experience of the most eminent practitioners, a light task is imposed on the writer, as their own words will best convey their sentiments.

Mauriceau, a name of deservedly great authority in midwifery, published his book on the diseases of women with child, and in child-bed, &c. &c. in the year 1688, after great practice in the Hotel Dieu, speaking of this operation, he says—“When a big-belly’d woman is effectively in labour, ’tis very rare but that an expert chirurgion can deliver the child dead or alive, whole or in pieces; in a word, he may do the work compleatly, if he behaves himself as the case requires, and according to the directions given in each

* Denman’s Introduct. pref. pag. 35.

particular chapter foregoing, treating of the several unnatural labours, without being necessitated in a very inhuman, cruel and barbarous manner, to have recourse to the *Cæsarean* operation during the mother's life, as some authors have too inconsiderately order'd, and sometimes practis'd themselves."

"In truth, there would seem some pretext of a lawful excuse to make martyrs of these poor women, if it were to bring a second *Cæsar* from them, whom they say was born in that manner, or some great and new prophet. In the time of the ancient Pagans, they did use to sacrifice innocent victims, for the public good, but never for a private. I know very well that they palliate it with a pretence of baptizing the infant, which else would be depriv'd of it, because the mother's death is, for the most part, the cause* of the child's. But I do not know that there ever was any law, christian or civil, which doth ordain the martyring and killing the mother to save the child. 'Tis rather to satisfy the avarice of some people, who care not much whether their wives die, provided they have a child to survive them; not so much for the sake of the children, but to inherit by them afterwards: for which cause they do easily consent to this cruel operation, which is

* Rather the occasion.

damnable policy. If they say, to render the fact less horrible in appearance, that it must never be undertaken, but when the woman is reduc'd to the utmost extremity: To that I answer, that a woman often recovers beyond hope or probability. And if they object that she may likewise escape after this operation; I do utterly deny it, by the testimony of the most expert surgeons that have practis'd it, who always had bad success, all the women ever dying in a short time after. I do highly commend *Guillemeau*, who to disabuse the world for such a wicked and pernicious practice, confesseth, speaking of this fatal operation, and owns (by way of repentance) that he did himself, twice, in the presence of Ambrose Pareé, put it into practice, and saw it thrice done more, by three several very expert chirurgeons, who omitted never a circumstance to make it succeed well; and notwithstanding all, the women died. As for Pareé, he will not acknowledge that he saw those two operations of *Guillemeau*, because he will not have posterity know that he was able to consent to so great a cruelty; but contents himself with advising only, that it should never be undertaken till the woman is dead, because there is no possibility she should escape it, not only because of the irregular wound, which must of necessity be made for this purpose in the belly, but chiefly for that in the womb, and for the excessive flux of

blood, which will immediately follow. However, contrary to the opinion of two such famous surgeons, there are some rash persons, who do obstinately maintain (tho' with as little reason as Rousset) that it is not impossible for a woman to escape, because they have seen some that have had the bones of their dead children come forth by an abscess of the belly; after that the flesh of them had pass'd the natural way in suppuration; which bones, by little and little, had pierced the womb and the belly also, and after that they were so drawn forth, yet the woman recover'd. As also others did not die, whose wombs, after precipitation and perfect putrefaction and gangrene were totally cut away. Indeed, we must acknowledge, what experience hath many times taught us, as it hath these things, which I believe have happen'd, and may again as well as those (tho' rarely); but it doth not follow, that this *Cæsarean* operation must needs succeed as well; because here is made at one stroke a very great wound in the belly and womb, which is ever the death of the poor woman immediately, or soon after."

"But when nature itself begins to separate and pierce these parts, by means of these bones, to cast them forth by some new way which it makes, not being able to do it by the common and natural, for want of the help of skilful persons, in

in due time, it doth it by degrees and not all at once, and according to the measure it drives these preternatural bodies forth of the womb, so it reunites and rejoins it at the same time proportionably and without the least flux of blood, which happens quite otherwise in the artificial operation. And, if it be true that some women have ever escap'd it, we must believe it a miracle, and the express hand of God (who can when he pleaseth raise the dead, as he did *Lazarus*, and change the course of nature when 'tis his good pleasure) rather than an effect of human prudence. There are many good women who, for having only heard some gossips speak of it, are very confident that they know such and such yet living, whose sides had been so opened to fetch the child out of their belly. Nay more, there are some who affirm, they know those who have had this operation practis'd on them three or four times successively, and yet alive; and the better to confirm so notable a lye, which they had only heard recited by others, and after having three or four times told it, believe it themselves for truth, as much as if they had seen it with their own eyes, will tell so many circumstances and particulars, that they easily persuade those into a belief, that do not understand the impossibility of it."

"There are others again, who shewing the scars

of some abscess they have had in their belly, would persuade that a child hath been taken out there ; to which purpose I will relate what I once saw myself concerning a big-belly'd woman that was in the *Hostel de Dieu* at *Paris*, when I there practis'd deliveries. This woman whether thro' cunning, feigning, or or thro' ignorance really believed it, did testify to all the women who were then in the said *Hostel de Dieu*, as also to an infinite number of other persons, and amongst the rest, to a good old nun that govern'd all, whom they call'd mother *Bouquet* (and at that time did preside in the hall of deliveries like another goddess *Lucina*), that she was very much afraid they must open her side to deliver her, as it had been two years before; in all which time she had made the same relation to, above a thousand several persons, each of whom it may be, had again related it to as many more : shewing to all of them the great scar, by which she said the chirurgeons had drawn the child out of her belly. Wherefore she pray'd mother *Bouquet* to recommend her to me, desiring rather to be deliver'd by me who was a chirurgeon, because she might be more safely help'd in such a business, than by a midwife. This good nun giving me this account, which she verily believ'd according to the relation, I told her, that not having faith enough to imagine it, I could not believe the

Cæsarean section had been made on that woman, as she had persuaded her. If you do not believe it, reply'd she, I will fetch her presently to you, and she herself shall tell you every circumstance. And immediately she caused her to be fetch'd, who told me the same she had related to her: but having particularly examin'd her from what part the child was so drawn forth, and whether she felt any great pain in the operation; she answered me, none, because she was then senseless, and remained so five or six days after. I asked her then, how she was certain that the child was brought away by incision in her belly, being she was not at that time sensible? she answer'd, the chirurgeon assured her it was so; and at the same time she shew'd me a great scar, situated just on the right side of her breast, about the middle of the ribs, where she had a great abscess, of which this scar remain'd. And, when I told her, that the breast was not the place where a child should be fetch'd, and that I had with my arguments convinc'd her of the impossibility of what she had believ'd, and made others believe, as the women of the Hostel de Dieu and mother *Bouquet* also; they began to be disabus'd and continued so, when three days after this conference I had delivered her with the greatest facility, altho' it was a very great child, which came quickly. If one could examine well the beginning of all

the stories of this operation, strictly weighing them, as I did upon this occasion, they would be found to be mere fables, and that which *Rousset* reports of his *Cæsarean* labours is nothing but the ravings, capriciousness and imposture of their authors." The importance of this extract must apologize for its length, as I fear there have been too many instances of the kind of imposture above related, which, blended with the belief in magic, witchcraft, and other supernatural operations, prevalent at that period, gave currency to any story that could be fabricated. The medical facts of that age should be received with extreme caution. Mauriceau goes on to say—
 "Now if, because of all these reasons, a chirurgien must never practice this cruel operation, whilst the mother is alive, altho' the child be certainly so (which for all that may sometimes be very doubtful) I pray what infamy would it be for him if having so killed the mother, the child should also be found dead, after it was thought to be alive, much more ought he to abstain from it when he is well assur'd it is dead."

Dionis, speaking of this operation on the dead subject, says—"We rarely find persons cruel enough to perform it on a living woman."*
 —And again—" 'Tis not only the cruelty of this

* Second demonstration, pag. 87.

operation, and the inevitable death which follows it, which ought to divert us from ever thinking of the performance of it; but besides, religion forbids it." After stating the opinion of the doctors of the Sorbonne, and the most famous casuists, to be, that the life of the mother ought rather to be saved than that of the child, he says—"On this principle we ought to take special care how we undertake an operation which will infallibly kill her." Ranking the stories of its successful performance among the fictions of ghosts and conjurors, he concludes—"None of our celebrated surgeons having practis'd this section, I am in the right to condemn it by their example."

I shall content myself with this selection of authorities for the last age, and shall now proceed to examine the state of medical opinion on this subject in other nations, and in this country, during the present century.

The improvements in anatomy, in physiology, and particularly in the operative part of surgery, have been great, during this term. France took the lead, having opened schools, in the last century, for teaching the different branches of the healing art, and the classes were gratuitously attended by a great number of pupils. Whatever advances were first made on the Continent, much

has been done in this country, and in no part of the world are there more able practitioners, or is a competent practical knowledge so widely diffused, as it is in this country at the present time.

Under these encouraging circumstances, it might be expected that the Cæsarean section would be again put to the test of experiment. Accordingly it has been tried both upon the Continent and in this country. But as there are three several conditions under which it has been performed, it will much facilitate the investigation of the subject to state them.

1. When the mother is dead and the child is surviving in the womb.

2. When the mother is living and the child is dead, but incapable of being delivered by the natural passages.

3. When the mother and child are both living, but the latter is incapable of being delivered by the natural passages.

When the mother is dead and the child is living, I believe nobody has ever questioned the propriety of performing it. But it is necessary to be well-assured that the mother is dead, lest,

like Vesalius, the operator should mistake a syncope for death, and bring disgrace and ruin upon himself. When it shall be ascertained that the mother is really dead, as delay will be productive of the greatest hazard to the child, recourse should be had immediately to the operation, under the reasonable supposition of the child being alive. *See Heister from which this is almost word for word taken.*

In the second case, namely, when the child is dead and the mother alive, a question may arise whether the child can be delivered through the natural passages, under circumstances less favourable than have been supposed by some practitioners to authorize the attempt, and thus to supersede the operation, in a set of cases that have been heretofore consigned to it. This question will be fully discussed below. But on the Continent they talk so familiarly of the Cæsarean section, it might be reasonably inferred, that the mother incurr'd little hazard in undergoing it; and their writings would lead to an opinion that it is even less dangerous to her than the crotchet.* What Scipio Mercurius mentions of his own time, would seem to be true of the present, both in France and Germany, namely, that the Cæsarean section was as common in France, as bleeding for the head-ach was in Italy. If there has

* Boudalocque, Vol. 3. pag. 217.

been no design to deceive, their extraordinary accounts can only be explained on the supposition of an abuse of terms ; and instead of alluding to the extraction of the fœtus by the Cæsarean section, the delivery of the child by instruments in all difficult labours must have been intended.*

There is a want of consistency in the most recent accounts of this operation, for whilst the French practitioners speak lightly of it, and assert that it is less dangerous to the mother than the crotchet, they also tell us, that it is generally fatal to the parent.† From the width of pelvis they admit to constitute the necessity for the section, it cannot indeed be wonder'd that it should more frequently occur to them, than to practitioners in this country. In many of Rousset's cases, the forceps and generally the crotchet would doubtless have accomplished the delivery, as the mothers are stated to have had natural births, after undergoing the operation ; and the same observation will apply to their more recent experience. The third case then, strictly speaking, constitutes the supposed necessity for the Cæsarean operation, namely, when the mother and child are both living, but the latter is incapable of being delivered by the natural passages.

* Heister's Surgery, par. 2. sec. v. pag. 35

† Boudalocque, vol. 3. pag. 219.

As from the general result of experience, either the life of the mother or that of the child must yield to the supreme law of necessity, and one be preferred to the other, a question arises as to their comparative value, for the French practitioners ordain, that nothing but death can authorize us to dismember the child in the womb, when it cannot be extracted entire. The decision has been unhappily given against the mother, in some cases, and instead of sacrificing the child, in those which would then be manageable by the crotchet, a regard to its life has led to the Cæsarean section, which has proved fatal to the mother. In this country, if any doubt ever existed, the question is now completely determined, and Dr. William Hunter, delivers the sentiments of every man capable of reflection, in the following quotation:—

“ Men of humanity, as well as of a reasoning faculty, need not be told that in desperate cases, our judgment and practice are not to be regulated merely by the chances with respect to life. The sufferings of the patient both in body and mind, should be fairly put into the scale, against the better chance for life. In such a trial I have seen a patient pay a much higher price in sufferings, than the little chance of saving life was worth. These reflections should be especially in our minds when we are to give an opinion in any case of the Cæsarean section, or of cutting the symphysis of the

ossa pubis. And in calculating the chances of a life to be saved, we should take care to make a just estimate of the life itself. Thus in more advanced age, the value of it is less in proportion ; it is less too in proportion, as it is attended with pains or infirmities, or with whatever will diminish or destroy the enjoyments of life. Existence is so nearly equal to nothing, that its real value must arise from its connexion with some kind of enjoyment ; and where upon the whole there is none, life is either worth nothing or a positive evil. The value of life rises likewise in proportion to the desire of life and the dread of death. The life of the mother is, for that reason, almost of an incomparably greater value than that of an unborn child ; a being which we may suppose, has no enjoyment, and has neither a desire to live, nor fear to die. This appears to be reasonable, and experience shews it to be the dictate of nature, as well as common sense. I have lived thirty-nine years in one of the largest cities in the world, and for the greater part of that time in a very active station, so that numbers of dangerous cases must have come within my knowledge, and these among all ranks of mankind ; yet I never, in any instance whatever, knew the life of a child put in any sort of competition with that of the mother, by the husband or any other person.”*

* Vaughan, on hydrophobia, &c.

The mother and child being both alive, and the pelvis so narrow that the child cannot be brought through the natural passages without loss of life, the Cæsarean operation would seem to offer the only resource for their mutual preservation. Reasoning from analogy, it has been said, that as the operation for the stone is performed with success, hysterotomy, or the section of the uterus, may also be done with an equal chance. It is true, Hippocrates forbids the operation for the stone, and the old writers agree in classing a wound of the uterus among mortal wounds. It becomes therefore a question of experience; and whatever reverence we may be induced to shew to the precepts of the Father of medicine in other cases, daily experience proves him to have been mistaken, with regard to the fatal termination of a wound of the bladder.

The Cæsarean section, Doctor Osborn informs us, has been performed eleven times in this kingdom (nine of which cases have been published) and it has proved fatal in every instance.* I believe others might be added, which have occurred since the publication of his work, but they have been attended with the same fatal event.

* Osborn's Essays on Midwifery, pag. 440.

It is easy to shew that any supposed analogy between the Cæsarean section, and the operation for the stone, is not sufficient for practical direction. Independently of the general circumstances connected with the full period of gestation, it must be observed, that the cavity of the abdomen is exposed; that a very large wound must of necessity be made into the womb; that a considerable hemorrhage may ensue from the division of so many enlarged blood-vessels; that extravasation into the abdomen, will inevitably take place in some degree; and that the uterine and general change which follows the removal of the child, will serve to add to the host of dangers which surround the unhappy mother. Besides these bodily sufferings, the forlorn hope of a very doubtful recovery, will serve to embitter her afflictions, and to aggravate the anguish of her mind. Whatever other dangers may attend the operation for the stone, it is unquestionably free from some of the most formidable evils attendant on the Cæsarean section.

Notwithstanding this cheerless prospect, it is admitted to have been successful on the Continent in one or two instances; and as it is limited to those cases, where all other means fail, shall we not be governed by the axiom, that a doubtful remedy is better than none?

To what cause soever the difference of result be owing, whether to a difference of climate, as above-mentioned, or to some more hidden cause, it does not seem material to investigate; for although it has lately been asserted to the contrary, the operation has certainly proved fatal in every instance in this country. And here I shall take occasion to observe, that in a matter so important, newspaper intelligence ought not to be relied on; a case thus announced some time ago, and lately published as a successful case of the Cæsarean operation, I find on inquiry to be essentially different.

Considering then the Cæsarean operation either analogically, or as having been uniformly fatal in this country, it must be abandoned, or as Doctor Osborn observes, the patient will be *doomed to inevitable destruction*.

Doctor Denman, not entirely rejecting this operation, has supposed a case in which it may become expedient, although so uniformly fatal; and after stating the general positions—he goes on to say—“ I am however of opinion, that no rule of sufficient authority to guide us can be formed from such calculations, and that our conduct is not to be governed wholly by them; but by the reflections of common sense, working in

a reasonable mind, stored with the knowledge of such calculations, and of many other collateral circumstances, which it is impossible to enumerate or describe, so as to render them applicable or useful." This is admitting that more than common talents are required to determine in so nice a matter. It has never been doubted that the application of general rules to each individual case must depend on the judgment of the practitioner; but, shall a practice be persisted in, which has proved invariably fatal to the mother in so many instances? Led by ideal glory, like the French practitioners, and others on the Continent, or some other motive, it is far from being improbable, that a man, less qualified to judge than Doctor Denman, shall fancy that he has hit on this identical case, and, under the supposed sanction of the doctor's opinion, he shall unnecessarily perform this operation. If a putrid fœtus should be extracted, and, as might be expected, the patient should die in consequence of the operation, would another, and yet another attempt be necessary to ascertain its impropriety? How many lives then shall be sacrificed for the possibility of one recovery? Would it not be better that a woman should die undelivered, rather than contrary to all precedent among us, and the rules of art, she should be consigned to such an end? Life is in the hands of God! and as there are cases of

recovery by the powers of nature, working an outlet by abscesses, and in other ways, the only hope for the patient's surviving is by a reliance on her aid. Whilst I have every respect for the high character of Doctor Denman, I cannot but lament that he should have admitted an exception, by which lives may be sacrificed under the mistaken authority of his name.

Rousset, it has been observed, recommends the early performance of this operation; an opinion which has been entertained and enforced by others. Professor Hamilton, says, Mr. Hoffman of Prussia informed him, that the Cæsarean operation had been very often successful in different parts of Germany, within the last ten years; and that the unsuccessful cases have been chiefly those in which the operation was delayed too long.* Extraordinary as the account is, I should have given credit to it, had Mr. Hoffman spoken of the facts from his own knowledge, having seen him when in England; but the state of surgery in Germany is too well known to induce a belief of so unusual an occurrence, even if the alledged frequency of its success did not tend to destroy its credibility.

Baudeloque, the last French writer on mid-

* Letters to Osborn,

wifery, tells us, that he had performed the operation twice, and that both his patients died, one on the fourth and the other on the fifth day.* And in Holland it was performed by the celebrated professor Camper, but one fatal case was sufficient to satisfy him. In a note, Boudalocque mentions several instances in which the operation had been successful, but it will be enough to satisfy the intelligent reader to extract his notice of the last case, as taken from the *Journal de Medicine* for 1770. "The surgeon having made the external incision too high, made another obliquely under it, &c.—he afterwards made three stitches in the *uterus*, and the operation had all possible success."†

A want of skill in the operator has been also suspected; but whether we regard the time or the manner of performing the operation, the two cases which occurred to Doctor Cooper, in the first of which, Mr. Thompson of the London Hospital, and in the latter, Mr. Hunter was the operator; and in which the most eminent professional characters in this country, were called in consultation, will leave no room to doubt that the operation had all the benefits both of the most eligible time, and of the best mode of operating.‡

* System of Midwifery, vol. 3. pag. 370.

† Ibid. pag. 361.

‡ Lond. Med. Observ. & Inquir.

x In the second of these cases, however, not a chance existed of preserving the life of the mother; under any circumstances her death was certain & by this operation

Every rational practitioner will feel himself governed by the result of the best experience of his own country, which will vary compared with that of other countries, from difference of climate, customs, and other causes; guided, however, by the probable truth of foreign as well as domestic recitals; and I hope no Englisman will attempt to regulate his practice in this operation, from foreign accounts of its success, for I should pity his patients without envying his credulity.

Warned by the fatal termination, it would appear superfluous to describe the manner of performing this operation; but as I have a remark or two to offer that may be useful in other cases, I shall briefly describe it. I shall be readily excused from saying any thing of the employment of the actual or potential cautery, for this purpose, the stories of their application are so incredible. The operation then divides itself into two distinct parts, the division of the parietes of the abdomen, and of the substance of the uterus. The external incision has been made longitudinally, obliquely, or transversely. One of Rousset's operators made a circular incision to shew his superior dexterity. The longitudinal and oblique incision has been made on either side of the navel; and the transverse, either above or below that point.

The chief object to be held in view, in the first instance, would seem to be the avoiding of hemorrhage. Accordingly the longitudinal incision has been made parallel to the outer edge of the recti muscles; and the oblique, in the direction of the *linea semilunaris*, inclining to the spine of the ilium, to avoid wounding the epigastric arteries. But this method is liable to objection, on the proposed ground of its safety, the artery sometimes deviating from its usual course;* and unless, from extreme deformity, the distended womb should incline very much to either side, it cannot in any respect deserve a preference.

The transverse incision has been preferred by some French practitioners; and it has been performed in this way, we are told, with success.† The incision is directed to be made transversely above the navel, through the integument and abdominal muscles, and then through the fundus of the uterus. The epigastric arteries will be thus divided, and although they may be immediately compressed and secured by ligature, some effusion of blood will necessarily take place, and the cavity will also be longer exposed. The most serious objection, however, will be the utter impos-

* Ferriar's *Med. Hist. and Reflect.* vol. 1. pag. 42.

† Guenin's *Histoire de deux opérations Césariennes.*

sibility of any extravasation that shall take place, during or after the operation, being afterwards discharged; so that should the patient escape, by a miracle, the first consequences of the operation, a second miracle must be wrought, or the patient will perish. The smaller annoyance from the protrusion of the viscera, the alledged reason for preferring the transverse incision, cannot be put in competition with so weighty an objection, as the extravasated fluid will in all probability act as an extraneous body, and induce peritoneal inflammation; which is at all times an extremely dangerous disease, and very commonly fatal.

Obviously the most eligible method is to make the incision in the linea alba, commencing immediately below the navel, and carrying it in a direct line towards the pubes, so as to make an opening six or seven inches in length. In this direction, no blood-vessel of any consequence can be divided; and it is also convenient for making the opening into the uterus. To detail the history of this mode of operating would afford little satisfaction; but it is of a much earlier date than Baudeloque has stated it to be. He mentions Deleurie and Waroquier, as the only surgeons who have performed the operation in the *linea alba* with success. I cannot resist the inclination to insert the following remark, on which the

reader will make his own comment. "It is easy to perceive, says M. Deleurye, all the advantages of having the wound in the uterus, as I may say, before the eyes, during the progress of the cure, and having it answer directly to the external incision; by that means the humours discharged from the uterus have a free exit."* The incision of the womb is of necessity made opposite to the external wound, and of the same dimensions, and a ligature may be applied on such vessels as shall require it, as directed by different writers; but when that shall become necessary, I have no conception of the possibility of a recovery.

The management of the external wound comes next under consideration; and this has been very fully described by every writer, who has published generally on the practice of surgery. I have therefore little to say on the subject, only to state in what respect my sentiments differ from their directions.

All extraneous matter being as much as possible cleared from the viscera, and the lips of the wound brought together by assistants, the suture, which has been designated gastrorraphy, should be made as directed by chirurgical

* Baudeloque's Midwifery, vol. 3. pag. 371.

writers, with this exception, namely, that the needles shall not be passed through the peritoneum. The danger to be apprehended from peritoneal inflammation has been stated above; and by puncturing that membrane, a great additional risk will be incurr'd; besides rendering the cavity imperfect, which in itself is a sufficient cause to induce the inflammation of any cavity, according to the opinion of the late Mr. Hunter.

The next point is the providing a passage for the transmission of any extravasation that shall take place, whether it be blood or any other fluid; and instead of introducing a tent or canula, as some have recommended, the light application of lint between the lips of the lower angle of the wound, so as in part to hinder the union of the sides, will accomplish it very completely. Should symptoms indicating a collection of fluid arise, it will be easy to break through any slight adhesion that shall have taken place between the parts of the surfaces lying in contact, and yet by adopting this method, every possible chance will be given for escaping inflammation of the cavity. It has been said to be necessary, to use the trocar, in some instances, as in the paracentesis of the abdomen, to draw off an accumulation of pus. The termination of peritoneal inflammation is sometimes by the effusion of a milky fluid, and

should the patient survive the additional consequences of this disease, tapping may become necessary. This fluid, I conjecture, has been mistaken for pus; for I have no conception of the system being able to bear up against the extensive mischief, that must happen under such circumstances.

Vulnerary decoctions, and injections composed of different materials, are said to have been thrown into the cavity, with the most salutary effect. Stimulant applications do not seem to be warranted by common experience, and if they have been found useful, it is probable that an adhesion had taken place between the viscera and peritoneum round the opening, and thus had shut out the rest of the abdomen from the influence of its action. When a collection of fluid does take place soon after the operation, the wound may be readily made a depending opening, by change of posture. The sutures should be supported by the application of adhesive plasters; and the bandage should be applied so as to make as light a degree of compression as possible upon the abdomen.

Tremendous as the operation is to the unhappy woman, it is simple to the operating surgeon. The unprofessional reader, who shall have witnessed the inspection of the abdomen of a dead

body, will form a tolerably correct notion of the manner of operating, from what has been said above. It requires no more than a superficial knowledge of anatomy, and does not call for the exercise of manual dexterity. A surgeon, who is cool and collected, (without which he ought not to undertake any operation,) cannot but possess sufficient knowledge, and use of his hands, to perform it with propriety. The operation for the stone, for the strangulated hernia, and for the depression of the cataract, and many others, demand much superior skill and dexterity in the operator.

Recourse has been had to the crotchet, as I observed before, in certain cases of difficulty, from the earliest period; but the use of forceps is a late discovery.

The invention has been generally given to the Chamberlens, who practised midwifery in London; and is supposed to have been made some time between the years 1665 and 1670.* They kept it a secret in this country, from interested motives; but one of the brothers going to settle

* Doctor Exton denies that the Chamberlens used any instrument, and asserts that they owed their celebrity to the method of delivering by the feet, a practice not generally known at that time.

in Paris, and being disappointed in his projects, he went afterwards into Holland, and there disposed of his secret to Roger Roonhuysen, who then practised midwifery at Amsterdam. "Roonhuysen, observing that he could use one blade of the forceps more easily and advantageously than both of them, and that he could better conceal it from the women and their assistants, confined himself to the use of it; and making some alterations, formed a distinct instrument; and thence has been considered as the inventor of the lever."*

Chapman, the second public teacher of midwifery in this country,† first published an account of the forceps used by the Chamberlens in the year 1733; but the instrument had been used by him, Giffard, Butler, and others, long before that period.‡

* Bland Med. Comm. vol. 2.

† Doctor John Mawbray published his *Female Physician* in 1724; and in 1725 his *Midwifery brought to perfection by manual operation*, which being little more than a translation of Daventer, are of little value; but he has the merit of being the first public teacher of midwifery in England.

‡ Palfyn, a surgeon who practised at Ghent, having seen the forceps used by the Chamberlens, (as it was reported) in one of his visits to London, whither he often went to learn the state of the art, published them on his return, as a discovery of his own. His account was printed in 1710.

We have seen that forceps were used by Avicenna, with the intention of saving the child; and it is not improbable, though now unimportant to know, that the Chamberlens took the hint from that source. The fillet had been used previous to this discovery, and was made by cutting a slit in a slip of cloth, large enough to pass over the head of the child; which continued to be employed by some, long after the introduction of the forceps; but, being found to be of much inferior utility to either of the above-mentioned instruments, it has deservedly fallen into disrepute.

Whatever invention or improvement of instruments had been made, still this art laboured under the defect of one essential circumstance requisite to reduce the practice of it to rational principles, namely, a knowledge of the manner in which the head of the child enters into, and descends through, the pelvis of the mother. The knowledge of this process, so necessary to the right understanding of a natural labour, and consequently the foundation of manual assistance, was first discovered by Sir Fielding Ould of Dublin, and published by him in the year 1742.* Since that time, a better method of managing natural labours has been pursued; and the manner of giving assistance with instruments has been progressively improving;

* Treatise of Midwifery, pag. 28.

which, together with a more rational treatment in child-bed, have raised the practice of midwifery to as high a degree of perfection, as any other branch of the healing art. But this, like all the other branches of medicine, will be farther improved, as a better acquaintance with the animal economy, and greater precision in experience, shall be attained.* The propriety of this remark will be admitted, on considering the great improvements recently introduced in the use of the crotchet; for, in those cases in which the Cæsarean section was deemed the only possible expedient, the delivery may now be accomplished by that instrument, with safety to the mother.

Doctor Osborn has shewn great ability, and ingenuity, in his method of delivering by the crotchet; and merits great commendation, from the profession and the public, for the great pains he has taken in recommending it to be adopted by practitioners, with the humane intention of superseding the fatal Cæsarean operation.

* The first establishment for lying-in women, in the British dominions, took place in the year 1739; and consisted of a ward, or small hospital, in the parochial Infirmary of St. James, Westminster; Sir Richard Manningham, who opened it, gave lectures there, and his pupils had opportunities of being qualified for practice, but the institution was supported by public subscription. Denman's *Introduct.*

The width of pelvis supposed to require absolutely the Cæsarean section, had not been ascertained with much exactness. But Doctor Osborn has proved by his experience, which has since been confirmed by that of others, that the child may be extracted by the crotchet, whatever the distortion shall be, if in any part of the cavity there shall be a space of one inch and a half in diameter; and, I believe, most of the pelvises, on which the Cæsarean operation has been performed, were above those dimensions.

It does not come within the present intention to discuss minutely, through what diameter of pelvis a living child may sometimes be born; Doctor Osborn lays it down as a rule, that when the measurement is from *two inches and upwards*, to less than three inches, from pubis to sacrum, recourse should be had early to the crotchet. But the uncertainty of the mother's calculation; the difficulty of ascertaining the exact dimensions of the pelvis; the relative proportion of the child's head, and its degree of compressibility; added to the strength of the labour pains; will materially vary a judgment on the case. When any doubt shall arise, it is scarcely necessary to mention that delay will be justified, until every uncertainty shall be removed; or till evident signs shall occur of the necessity of opening the head,

such as the inability of the powers of nature to force the head into the pelvis; or the mother's life shall appear to be in danger from farther procrastination. This precaution will be particularly necessary, as Professor Hamilton informs us of a living child having been born, through a pelvis, the short diameter of which was *sensibly under three inches*.* With this exception, the rule laid down by Doctor Osborn for the use of the crotchet, will direct the conduct of the practitioner. After perforating the cranium, and extracting the brain, the head commonly descends by the force of the pains; but, should the pelvis be so contracted as to measure only from one inch and a half to rather more than two inches in diameter, the crotchet will become necessary to accomplish the delivery;† and, under these circumstances, the early opening of the head will much facilitate the subsequent part of the operation.

Another case, however, presents itself for the crotchet; which, until Doctor Osborn proved the contrary by his delivery of Elizabeth Sher-

* Letters to Osborn, pag. 101.

† Mr. Cruikshank's *tire tete* will probably accomplish the delivery, as well as the crotchet, in this case. A delineation of it will be found in Mr. Savigny's Collection of Engravings of Modern Surgical Instruments.

wood, had' been deemed remediable by the Cæ-sarean section alone. On examining a great number of children's heads, who died in or near the time of birth, there occurred the smallest possible variety in the diameter of the bones forming the basis of the cranium, when it is turned sideways; and in measuring the bones in that state, it was found that their diameter never exceeded one inch and a half, and seldom quite so much, after the removal of the frontal and parietal bones. Upon these premises the doctor is convinced that, when there is a space from pubis to sacrum, or from the fore to the hind part of the upper aperture of the pelvis, equal to an inch and a half, it will be always practicable to extract a child by the crotchet, after the head has been some time opened, when the texture of the child's body has been softened by putrefaction, and the whole of the frontal and parietal bones have been picked away; and that, with tolerable facility to the operator, and perfect safety to the parent.* But as the skill and dexterity manifested on this trying occasion, and the leading circumstances of the case, will be best understood from a recital of it, and especially as this essay may fall into the hands of some not possessed of Doctor Osborn's publication, I shall take the liberty of transcribing every thing material in his account.

*. *Essays on Midwifery*, pag. 230.

CASE I.

“ Elizabeth Sherwood was, from early infancy, of an infirm weakly constitution, and of a ricketty habit; which continuing for many years, so much hindered her growth, that her height never exceeded forty-two inches. She was at the same time so extremely deformed, both in her spine and lower extremities, as never to be able to stand erect for one minute, without the assistance of a crutch under each arm. At the age of twenty-seven years she however became with child, and was admitted a patient into the Store-street Hospital. Early on Sunday morning, November 19th, 1776, she came into the house, and complained of having been in pain the two preceding days and nights, so as to have had very little sleep. Doctor Osborn examined her per vaginam that evening with great attention; and found her pelvis singularly distorted, and the capacity very much contracted.

Immediately on introducing the finger, a tumour presented equal in size, and not very unlike in the feel, to a child's head. This tumour was instantly discovered to be formed by the basis of the os sacrum and the last lumbar vertebra, which so narrowed the pelvis at the brim, as to leave barely room for one finger to pass between it and the symphysis pubis; so that the space

from bone to bone at that part could not exceed three quarters of an inch. On the left side of the projection, quite to the ilium, which was about two inches and a half in length, the diameter in the opinion of some was even narrower. On the right side, the aperture was rather more than two inches in length, and as it admitted the points of three fingers, lying over each other, in the widest part, it might be about one inch and three quarters from the hind to the fore part, but it became gradually narrower, both towards the ilium, and towards the projection.

The os uteri although but little dilated was soft and flabby, as it usually is on the approach, or in the beginning of labour. With some difficulty Doctor Osborn perceived the child's head through the unbroken membranes, very high above the projection. The abdomen was of the usual size at the full period of utero-gestation.

As the belly was hard and tender, and she seemed much fatigued for want of rest, fifteen drops of laudanum were given her, by which some sleep was procured between the pains. Some time after the membranes broke, and the usual quantity of liquor amnii came away. The next morning, being hot and thirsty, and her pulse quick, ten ounces of blood were taken away, and from the

bandage slipping, she lost as much more before the accident was discovered. The state of the os uteri and the position of the child's head remained the same.

From the extraordinary circumstances of the case Doctor Osborn requested the advice and assistance of his professional friends, and accordingly Doctors Bromfield, Denman, Walker, and Mr. Watson, met in consultation that evening, and after the fullest examination, they all agreed that it was not wider, but some thought it narrower than above stated. After maturely weighing every circumstance, and particularly the probability of the child's being alive, as it was in contemplation to perform the Cæsarean section, so that there should be a certainty of saving one life, at least, it was agreed, on the belief that the child was dead, to perforate the cranium, and attempt to deliver with the crotchet.

Doctor Osborn began the operation about eleven that night, after placing her in the usual manner, close to the edge of the bed, on her left side, as the situation most commodious for the patient and himself. Even the first part of the operation, which in general is sufficiently easy, was attended with considerable difficulty, and some danger. The os uteri was but *little dilated*, and

was *awkwardly situated in the centre, and most contracted part, of the brim of the pelvis*. The child's head lay loose above the brim, and scarcely within reach of the finger; nor was there any suture directly opposite to the os uteri. The abdomen being compressed by an assistant, with sufficient force to keep the head in contact with the brim, during the perforation; the scissars were cautiously introduced through the os uteri, and, after repeated trials, the point was at length fixed in the sagittal suture, near the superior fontanelle. It penetrated into the cavity of the head with great facility, and, after destroying the texture of the brain, a considerable quantity was extracted with a common spoon, and then, breaking down the parietal bones, an opening was made sufficient for the free discharge of what remained. She was left in this state; and although she was fatigued no opiate was given, it being intended to have the full effect of the labour pains; hoping, after the discharge of the brain, that the bones would collapse, and that a portion of them, at least, would be forced into the pelvis. Notwithstanding the pains were frequent and violent all night, there was no perceptible alteration in the position of the child's head in the morning. The pains were neither so strong, nor so frequent during the day; her pulse was extremely quick, but tolerably strong; the discharge from the vagina was very considerable in

quantity, and most abominably fetid. Doctors Bromfield, Denman, and Hunter, saw her in the course of the day, and she was examined besides by more than thirty students in midwifery, who were at that time attending Doctor Denman's and Doctor Osborn's lectures. The pains again increased considerably towards evening, and, to take the benefit of the full effect of them, no opiate was given, and consequently she had no sleep. The pains continuing the whole night, her strength was greatly reduced the following morning; yet every precaution had been taken to guard against fever, by keeping her cool and forbidding the use of strong liquors. Her spirits, however, were good, and her resolution unabated; for, although she was extremely anxious to be delivered, in any way; she was equally ready to submit to farther delay, if required. A small portion of the head was now found squeezed into the pelvis, and some detached bits of the parietal bones were lying loose in the vagina.

The intention was, by delaying the extraction of the child six-and-thirty hours after opening the head, first, to allow the uterus, by its continued contractions, to force the head as much within reach of the crotchet as the nature of the case admitted; and, secondly, by inducing the utmost

possible degree of putrefaction, to diminish the resistance to its extraction. These two purposes appearing to be completely answered, Doctor Osborn was fearful, lest by permitting so large a mass of putrid matter to remain in the womb, longer than was absolutely necessary, she should incur the hazard of a putrid fever, after escaping the consequences of the inevitable violence of the operation.

Far from being satisfied of its practibility, the doctor, however, determined to attempt to extract the child. And, adverting to the small space of only one inch and three quarters at the utmost, in the widest, and that, only on one side of the projecting sacrum; while the space between it and the symphysis, and on the other side, barely amounted to three quarters of an inch, the expression will appear to be very justifiable. Placing her, therefore, as above-mentioned, the operation was entered on; and as from the position of the os uteri, in the narrowest part of the brim of the pelvis, the curved point of the crotchet could not be introduced without great difficulty and danger; the first effort was directed to bring the os uteri into the widest part of the brim of the pelvis, and to *dilate* it as much as possible; both which objects were accomplished, as far as the bones permitted the dilatation, *without much trouble*. The doctor then introduced the

crotchet through the perforation in the head, and by repeated efforts, made in the slowest and most cautious manner, he destroyed almost the whole of the parietal and frontal bones ; and, as they became loose and detached, they were extracted with a pair of small forceps, to guard against laceration of the vagina in their passage through it.

The great bulk of the head, formed by the basis of the skull, still, however, remained above the brim of the pelvis ; and it lay in such a way, as to render it impossible to enter, without either diminishing the volume, or changing the position : the former was the most obvious method, as being a continuation of the same process ; but he was repeatedly foiled in every effort to break the solid bones forming the basis of the cranium, the crotchet invariably slipping, before sufficient force could be exerted to break the bone. A better purchase was at last obtained by fixing the point in the great foramen, and applying the convex side of the instrument to the pubis ; and, with the instrument thus fixed, the force was slowly, gradually, but steadily increased, till it arrived to that degree of violence, which nothing but the failure of gentler means, and the extreme necessity of the case, could justify ; and even this was to no purpose, not the smallest advantage being gained by these exertions.

From this total disappointment, the first idea of breaking the basis of the cranium was abandoned; and the second, to endeavour to change the position, was determined on; an expedient that offered but a forlorn, though the only hope, from the best information that could be gained by the most accurate examination. The former purchase being regained, two fingers of the left hand were introduced to endeavour to raise one side of the fore part of the head, and turn it a little edgeways. The attempt succeeded immediately, and easily; by which, two great objects were at once accomplished, the position was changed and the volume diminished. Every difficulty being now removed, by persevering in the same means for a short time longer, the remaining part of the head was brought down, and out of the os externum.

After waiting a few minutes, a napkin was put round the neck of the child, and given to an assistant. After perforating the thorax, the crotchet was fixed firmly in the sternum, and by the united force of the doctor and his assistant, strongly exerted for about a quarter of an hour, first one shoulder was brought down and then the other; and lastly, after opening the abdomen, the whole body (with the sternum and spine pressed close together) was extracted in the most putrid and

almost dissolved state. It appeared to be a moderately sized child, at the full time. The bones of the head were preserved. The placenta came away without much trouble. The operation continued for about three hours, and the poor creature, although she had been in strong labour three days, and her bodily strength was much exhausted, by violent and unavailing pains, yet supported the whole business with surprising fortitude, and suffered much less than might reasonably have been expected, either from the length of the labour, or the extreme violence in the delivery. She went to sleep very soon after the operation was finished, passed a good night, voided her urine freely, complained of very little pain, had only the usual fever, and recovered so fast, that she sat up on the seventh day; acknowledging, with great gratitude, that she was then as well, in all respects, as in any former period of her life."

Since the publication of this extraordinary case by Doctor Osborn, other practitioners have been led to attempt the delivery of a child under circumstances of such extreme distortion, as had been before deemed to admit of no other mode of delivery than the Cæsarean section. I have myself had occasion to apply the crotchet in cases where the pelvis has

been very narrow, and have always found that the patients speedily recovered from the consequences of the operation.*

CASE II.

In the year 1786, Doctor Clarke published two cases in the London Medical Journal, in confirmation of the opinions and practice of Dr. Osborn, with whom he is joint lecturer in midwifery. In the first, the pelvis was not more than one inch and a half in diameter, from pubis to sacrum; but, on opening the head, and waiting till putrefaction had taken place, the delivery was accomplished by Doctor Osborn, without any extraordinary difficulty.

* My connexion with the Infirmary, gives me opportunities of seeing a greater variety of difficult cases in midwifery, than would otherwise fall to my lot. In the year 1790, I proposed to the trustees to annex midwifery to the other objects of their charity, there being then no establishment in the town for that purpose. Soon after my proposal was made, the present Lying-in Hospital was instituted, without my knowledge; but the trustees adopted so much of my plan as is contained in the following rule, which is now inscribed on every home-patient recommendation.

“ Poor married women will be attended in labour by the surgeons, when the midwife *cannot deliver them*, on application being made at the Infirmary, in the day, and to the Bathman, at the gate of the Infirmary, in the night.”

CASE III.

Doctor Clarke's account of his second case is particularly interesting, and as it is very much to my purpose, I will gratify my reader by the recital of it, in the manner of the first case, described from Doctor Osborn.

“ Mrs. West, aged thirty-two years, requested Doctor Clarke to attend her in her labour. She had passed the former part of her pregnancy with tolerable ease; but, towards the expiration of it, she had become very thin and uneasy, from the bulk of her belly, which was then extremely pendulous over the os pubis.

In the very early part of her life, she had sustained the misfortune of fracturing the tibia of one side, and not long afterwards, the femur of the other. The weakness arising from the confinement necessarily occasioned by these accidents, superadded, probably, to a previous disposition to the disease, produced the rickets; the consequence of which was, that every bone which supported any weight, yielded to the superincumbent pressure. Her growth, by this means, was impeded so much, that she now only measures *thirty-nine inches and a half* in height.

She was seized with regular periodical pains,

on Wednesday, November 2, 1785, which continued through the two following days ; but, becoming more frequent and stronger on Saturday, Doctor Clarke was sent for at four o'clock in the afternoon, when he found the os uteri lying very high, and dilated to the size of half a crown : the dilatation went on increasing and the membranes protruded. Doctor Osborn met Doctor Clarke in consultation, at eleven o'clock ; and, on the former gentleman taking a very accurate examination, he accidentally ruptured the membranes, when the head was discovered lying above the brim of the pelvis : they were both of opinion that the diameter was *less than an inch and a half*, from the os pubis to the upper part of the os sacrum. Nevertheless, in conformity with the principle laid down by Doctor Osborn, in Eliz. Sherwood's case, it was determined to perforate the head ; which was accordingly done by Doctor Clarke, at the lambdoidal suture, which Doctor Osborn discovered in his examination ; the necessary degree of compression being previously made on the abdomen. A perforation was made, as large as the deformity would permit ; and the brain scooped out, as far as was practicable, with the small end of a spoon. She was then left during the night, to wait the full effect of the labour pains, and of any disposition to putrefaction that might come on ; an erect position be-

ing inculcated to favour the evacuation of the brain.

The pains were exceedingly strong and frequent during the night ; and, at six in the morning, part of the head was found entering the superior aperture, diminished by the further discharge of the brain ; but the basis of the skull was still above the brim. The extraction with the blunt hook, introduced into the opening, was now attempted, but it failed ; although as much force was exerted as was deemed safe to the patient. The parietes of the skull were therefore picked away, partly by the fingers, and partly by the blunt hook, by which some advantage was gained ; as it enabled Doctor Clarke to bring away part of the bones composing the sides of the cranium. The bulk of the head, thus considerably diminished, was extracted in about twenty minutes or half an hour, by firmly fixing the blunt hook in the foramen magnum, and exerting a regular commanding force, but resting at intervals. The body, allowing of more compression, came away comparatively with ease, and the placenta followed in about ten minutes."

The patient recovered from the effects of her labour in a few days, without experiencing any considerable indisposition.

Doctor Clarke then observes—"Such were the circumstances attending these two cases; upon which I have no other remark to make, than that in neither of them was delivery attended with any great degree of difficulty; nor did the management of them require any extraordinary skill or dexterity. The great intention of bringing them forward is to prove, that it is possible to ^{extract} deliver a child, when the head is lessened, through almost any pelvis, however small its dimensions may be; and therefore, the Cæsarean operation can hardly become necessary simply on account of the diminution of the capacity of the pelvis."

Should then a case occur, in which even the widest part of the pelvis is *one inch and a half* in diameter, these cases prove, that the delivery may be accomplished by the crotchet, with perfect safety to the mother, and with no great difficulty to the operator.

The first part of labour will go on as usual, even in a distorted pelvis, the membranes opening and distending the os uteri; but, after they have burst, and the waters have come away; as the head cannot press upon it, from being prevented by the distortion, some degree of collapse will of necessity take place. Should even some

These cases prove no more than that the Delivery by the Crotchet may be perfectly safe; not that it always will be. & may not the same be said of the Cæsarean Operation?

degree of rigidity prevail, the resistance will be overcome with little difficulty, by introducing first one and then the other fingers, in succession, as directed by Celsus; or, by introducing the hand, as Paulus concisely expresses it ‘*digitis in unum conductis*.’ But, should the patient have been in labour for some days, and the waters have come away, after duly collecting; it is not likely to make any material resistance to a cautiously applied distending force. Doctor Osborn says, that the dilatation of the os uteri was accomplished with little trouble, in the case of Elizabeth Sherwood.

In that deformity of the pelvis, in which it has been held indispensibly necessary to perform the Cæsarean operation, to accomplish the delivery, but which the above cases prove to be otherwise; it has been deemed requisite to obtain absolute certainty of the child being alive; and also, in such a state of vigour, as to give every possible assurance of its surviving this so fatal operation to the mother.

Many signs are laid down by which we are instructed to determine on the child’s being alive; but they are in general so equivocal, that it is only when taken collectively, that any stress can be laid upon them. The declaration of the

mother, by which we are guided, for the most part, is not at all to be relied on in this instance.

Women, not pregnant, have asserted that they felt the motion of the child ; and every practitioner must have met with instances of the mother confidently declaring the child to be alive ; and yet, soon after, her mistake has been manifest, by the birth of a foetus that had been dead some time. Agitation of mind, added to long bodily suffering, will render a woman unable to give a distinct account of her feelings ; and, if in any way led to hope for relief, from answering in the affirmative, the imagination will often supply the want of real sensation. In a matter so important, the practitioner is called upon to exercise his skill and circumspection ; and when doubt shall arise, prudence, propriety, and humanity, demand the forbearance of means, which will prove inevitably fatal to the mother. But if, on the testimony of the mother, the Cæsarean section should be performed, and a putrid child should be extracted, (as the facts prove that she will certainly die of the operation,) it would be difficult to determine whether the operator deserved most reprehension, for his inexcusable ignorance, or cruel inattention.

Notwithstanding the alledged success of the

Cæsarean operation in France, the discovery of the section of the symphysis pubis by M. Sigault, was ushered into the world with extraordinary pomp, with a degree of enthusiasm unexampled, and scarcely consistent with the sober dictates of philosophical inquiry. As it was intended to supersede the Cæsarean section, this exulting expression of general opinion, would lead to a suspicion that the event of the old operation had been represented in a light more favourable than experience warranted. In the section of the symphysis, its partisans have been, however, much disappointed of their original expectations; for, it was found to be more injurious to the mother, and less safe to the child, than they had at first conceived. Owing to the deservedly great influence of Doctor William Hunter, who early took up the question, it was prevented from gaining a footing here; having never been performed, I believe, more than once, in this country.

Although abandoned with a view to the preservation of the mother and child, it was suggested by Doctor Hunter, that it might be a considerable improvement in that distortion of the pelvis, in which the head cannot otherwise be brought within reach of the crotchet. The suggestion, in my opinion, claims serious attention. I know Doctor Osborn asserts that there

is no such case ; thinking, that even if conception could take place, the necessary subsequent changes would be prevented by the distortion, and consequently hinder the completion of the full period of utero-gestation.

Some practitioners, however, of great eminence in their profession, have questioned the truth of his observation ; and have still advised the Cæsarean operation, when the dimensions of the pelvis are under what he has laid down as the narrowest for the use of the crotchet.

Doctor Denman is of opinion that the operation is justifiable, when there is only the space of one inch between pubis and sacrum ; which seems to correspond with the opinion of Professor Hamilton, who recommends it when there is room for the admission of one finger only, in the superior or inferior aperture. I apprehend, even then, it must be understood as done to preserve the child ; and that there should be no doubt of the child being alive and vigorous, as it has proved so uniformly fatal to the mother. But, as it is admitted that the life of the child shall not be put in competition with the life of the mother ; if means could be devised to bring the head within reach of the crotchet, the delivery should, if possible, be accomplished by that instrument. The section of the symphysis

pubis offers this expedient. Many experiments have been instituted to ascertain the space that would probably be gained by the separation of the bones at the symphysis pubis, without injuring the sacro-iliac ligaments; and, in some that I witnessed, it appeared to me to be sufficient for the purpose. Precision, however, will be attained with difficulty; as the nature and degree of distortion will materially vary the dimensions to be thus acquired. I wish to be understood as adopting this alternative not from choice but necessity.

When a case shall arise in which the child cannot be delivered by the crotchet, from the brim of the pelvis being no more than one inch in diameter; I propose to combine the two operations, and to divide the symphysis pubis to make way for the crotchet. Doctor Osborn has urged several objections against this proposal, although he admits that the operation at the symphysis is not so certainly fatal as the Cæsarean section. Weighty objections doubtless press against it; but whilst there are no other means for preserving life, bad as the chance is, it becomes a question whether it be worth risking; and, after maturely considering the case, should an attempt for saving the life of the mother be judged expedient, as the last resource it may be adopted.

The space gained has been differently stated, at from three to eight or nine lines in the diameter ;—the medium distance would probably be sufficient to accomplish the delivery by the crotchet.*

The objections urged against this mode of delivery, when the head is of the full size, will not apply to its reduced bulk ; and it should be remembered, that the symphysis is formed of cartilage and ligament ; so that whatever pressure shall be made against the divided edges, will not be made against the sharp angles of bone. That much injury may be done anteriorly will not be denied ; but, does the continued pressure of the child's head never produce mischief in other cases ? By the introduction of a female sound for a guide, a cautious and steady operator will avoid wounding the urethra ; and, as the base of the of the skull will probably be turned sideways, it will suffer less in extraction than in other cases of the crotchet ; in which it must in general be injured from pressure against the pubis. If the

* Baudeloque and others mention, that the space gained by the section of the symphysis pubis is in the inverse proportion of the degree of distortion ; so that should the original dimensions be one inch and an half from pubis to sacrum, and four lines should be gained by the section ; six lines will be acquired should the pelvis be no more than one inch in diameter,

separation, however, be carried beyond a certain length, laceration will probably ensue; and, should this accident occur, I see no reason to apprehend more danger from it than follows the extraction of a large stone from the bladder through a small opening, which will induce a lacerated wound, but which we know will not uncommonly heal. The sacro-iliac ligaments would certainly not be injured by choice, but the consequences, I believe, are not generally fatal; and, should it be urged that great pain and lameness will afflict the patient for a long time after, a reply will readily occur, that life was at stake; and surely there are few who would not compound, for the prospect of temporary pain and inconvenience, to have it preserved to them.


A spontaneous separation sometimes occurs, both there and at the pubis; and yet the patient has been again restored to health.

I do not see, in other respects, in what this compound operation differs from the most difficult crotchet case—the Cæsarean section is certainly fatal to the mother in this country—the life of the child, it is agreed, shall not be put in competition with the parent's life—the section of the symphysis is neither so formidable nor so fatal as the Cæsarean


section—and the crotchet has been successfully applied in dimensions, which will probably be thus acquired.

Upon the whole then in that supposed case of distortion (which I hope will never happen) in which the mother must be doomed to death, from the impossibility of delivering the child by the crotchet, the compound operation I have recommended will furnish a resource, approved by reason and sanctioned by experience; inasmuch as the section of the symphysis pubis has been made, and the crotchet has been used, though separately, yet with safety. Such a case will be attended, unquestionably, with additional hazard; but it offers the only chance to the mother, to the preservation of whose life our chief care should be directed: and, I hope that in future all trace of the Cæsarean operation will be banished from professional books; for it can never be justifiable during the parent's life, and stands recorded only to disgrace the art.

I do not believe that the compound operation here proposed could ever be undertaken with the least chance of preserving the Mother, and would much rather in such an unfortunate case recommend the Cæsarean Operation, as not being at all more hazardous to the Mother & affording a more probable chance of saving the child.



Observations on Cancer.



There is no chronic disease, which has struck so much terror into mankind, as cancer; arising, probably, from its so frequently occurring, particularly among women; from the excruciating pain and offensive discharge with which it is attended, in the advanced stage; and from the slow degrees by which it goes on, to its certainly fatal termination.

Hippocrates, informs us of the early opinions entertained of the dangerous, and incurable nature of this complaint, in the following aphorism—
“ Quibus cancri occulti oriuntur, eos non curare præstat. Curati namque cito pereunt, non curati vero diutius perdurant.”*

* Lib. vi. Sect. vi., Aphor. 58. Ed. Foesii.

From an opinion that cancer originated in inspissated black bile, stagnating in and indurating the part; the treatment was, according to the prevailing doctrine of that time, to apply emollients, and remedies tending to dilute it. But such means would soon convert an occult into an open cancer; and, therefore, confirm the truth of the above aphorism.

It is important to ascertain with precision, the diagnosis of diseases of near resemblance, yet requiring an essential diversity of treatment; a matter sometimes of extreme difficulty, and attainable only by great experience and accurate observation.

Celsus mentions several varieties of cancer, one of which he states to be curable; and his account proves him to have been better acquainted with the disease than Hippocrates, as he is more full on the subject.

He distinguishes cancer principally into two kinds, namely, the cacoethes, and the carcinoma; the former of which he states to be curable, and the latter incurable: but, he observes, that one can be known from the other only by time, and experiment. When, therefore, a supposed case of cancer occurred, highly stimulating applica-

tions were directed; and, if the disease seemed to yield, it was called *cacoethes*; and then, the scalpel and actual cautery were employed to effectuate a cure. But, if the disorder was aggravated by the irritating dressings, it was denominated *carcinoma*, and the mildest applications were substituted in their stead.*

In a case of genuine cancer, such treatment would prove highly detrimental; and in scrofulous, or other indolent tumours, milder means would prove equally beneficial.

We find from the writings of Avicenna, Lanfranc, Guido, and others, that an opinion prevailed generally of genuine cancer, or the cancer apostema of Theodoric, being aggravated by irritating applications; and therefore, under sanction of the axiom of Hippocrates "*contraria sunt contrariorum remedia*" emollients were used to soften and disperse it; which would tend merely to excite the dormant evil into activity, and thus to hurry on the fatal catastrophe.†

Hildanus, laments the mistakes committed in his time, from an ignorance of the nature of can-

* Lib. v, cap. 28. sect. 2.

† Hild. Cent. 1, obs. 89. pag. 69. & Cent. 3, obs. 87. pag. 286,

cer;* and, as arsenical preparations were much in vogue at that period, dreadful havock must have followed their so frequent use.

Notwithstanding that modern practice is enriched with many valuable facts relative to the history of this disorder, cases occur occasionally, which baffle the discernment of the experienced practitioner.

The distinction between a well-marked case of cancer, and other tumours, requires no great skill or penetration; but, to distinguish it from an innocent glandular enlargement, in the earlier stage, demands greater precision, sometimes, than has been yet attained. This uncertainty in the diagnosis, has been a source of calumny to the profession; and an encouragement to artful and designing men, to increase the fears, and impose on the credulity of the public. Whatsoever the interested shall assert, it is evident that a remedy has not been yet discovered, possessed of the power of curing cancer; or it is reasonable to suppose, that it would be as generally successful, as mercury is in curing the venereal disease.

Many years ago, Doctor Denman drew up proposals for the establishment of a house for the

* Hild. Cent. vi. pag. 609.

reception of cancerous cases only.* And, about seven years since, some benevolent gentleman, who chose to conceal his name, gave a donation of more than three thousand pounds to the Middlesex-hospital, for the purpose of forming such an establishment.

Being much gratified by the perusal of Mr. Howard's account of that institution, and desirous of co-operating in so laudable a measure, I drew up the following address, which, having received the sanction of the physicians and surgeons of the Infirmary, was presented to the Weekly-Board in the year 1792.

“ The Medical Committee, ever anxious to promote the humane and benevolent views of the Trustees, and desirous of improving the art they profess, have seen, with peculiar pleasure, a plan of the Governors, for the establishment of a ward in the Middlesex-hospital, for the reception of persons afflicted with cancer; intending thereby to acquire a more accurate knowledge of the disease, and more improved methods of relief. As every disease to which the human frame is liable, meets with immediate attention, from the excellent plan on which these charities are now conducted, we have nothing to borrow from them

* Introd. to Midwif. vol. 1. pag. 196.

respecting the admission of patients; but are of opinion, that if a journal were kept in the manner they propose, and to be open to general inspection, much good would arise to the objects of these institutions, and general benefit to the community. We have therefore agreed to keep an exact account of each case of cancer, which shall come under our care, in which will be recorded a faithful history of the disease, with its attendant circumstances; the effects of medicines; and of operations when necessary; together with all the collateral helps to be gained by an inquiry into constitutional habits and diseases not strictly cancerous, but probably connected with it.

That our knowledge of the natural history and treatment of this disease is imperfect, we candidly allow; and that the diffidence accompanying uncertainty may have occasioned a failure in its treatment, where more harsh and severe remedies have succeeded, we readily acknowledge; but that severe and even violent remedies have been used, where the more lenient plans of scientific treatment would have succeeded, we have too much reason to apprehend.

By a series of cases conducted on this plan, we hope, in time, to acquire such a body of facts, as to proportion the strength of the remedy to

the necessity of the case, applying lenient ones only in the milder forms, and the more severe in the more violent stages of the complaint; and, in the end, to soften the means, as well as to diminish the fatality of this most horrible of all maladies.

We beg leave, therefore, to lay these our sentiments before you, for the information of the Trustees at large, hoping they will meet with that attention, their importance to the public weal shall claim."

In consequence of their willing acceptance of this proposal, the Trustees rescinded as much of the fiftieth rule, as relates to the admission of incurable cases, in favour of cancer-patients; which are now kept in the house, at the discretion of the practitioner, under whose care they happen to come. But, instead of confining them to one apartment, it has been found better to distribute them through the different wards. The company of convalescents, and their occasional assistance, contribute materially to soften the hard fate of such patients, and to render less rugged the hopeless prospect before them.

Although I am of opinion, that no remedy is yet known for cancer ; yet, I am aware, that the ~~the~~ public opinion is disposed to attribute much efficacy to the remedy used by certain celebrated empirics in this county. I am inclined to think, however, that they themselves know too well its powers to expect more from it, than from other caustics ; for, if the accounts of pauper-patients can be relied on, I have had cases of genuine cancer, sent by them to the Infirmary, time enough for extirpation by the knife.

The following case will shew that their remedy will not cure a *genuine* cancer :

CASE I.

————— perceived a tubercle on the fore part of the right leg, just below the knee ; before I saw him, it had ulcerated extensively, was very painful, and the tibia had become carious. I destroyed the ulcerated surface with caustic, and repeatedly produced an exfoliation from the bone ; still the disease went on, and as the inguinal glands were not perceptibly affected, I proposed amputation ; but he refused to submit to it, and placed himself under the care of these celebrated empirics. In a few weeks he returned, earnestly requesting me to remove his limb ; it was, how-

ever, too late, the glands in the groin being very much enlarged, and he died in about ten days after his admission.

To prove that tumours not cancerous, are sometimes consigned to all the severity of treatment supposed to be adapted to cancer, I shall relate two cases.

CASE II.

A florid healthy looking woman, of middle-age, applied to me about three years since, for a painful enlargement of her left breast, of several months standing. The account she gave was—that the disease came on without any evident cause; that the whole breast was affected from the beginning; that she experienced less pain in the earlier stage; but, that for some time past, and particularly the week before, it had been so severe, as to induce her to apply for help. She was told by the person to whom she applied, that it was a *stomach* cancer, for which he could promise her no relief; but that she must attend, and undergo the usual dressings. Knowing, from report, the severe pain that would be occasioned by them; and, receiving so little promise of ultimate benefit; she determined to try regular professional advice, and accordingly came to the Infirmary.

After a careful examination of the tumour; and, having maturely weighed all the circumstances of her case; I had no hesitation in pronouncing it not to be cancerous. Leeches were directed to be applied twice a week; a solution of neutral salts was ordered to be taken every morning, so as to procure three or four evacuations in the course of the day; and, she was instructed to use the infusion of hemlock with litharge of vinegar, as an embrocation to the part. In less than two months, the tumour was entirely dispersed; and she returned thanks for her cure.

The truth of my assertion was confirmed, a year ago, from more respectable authority.

CASE III.

A lady, resident in Yorkshire, perceiving a tumour in her left breast, which was occasionally painful, came over to Manchester to ask my advice. On her way hither, she was informed by some celebrated cancer-doctors, whose opinion she had determined to take, that it was a cancer; and, as the dressings necessary to remove it would be painful, she must reside near them, for the benefit of their direction.

The disease appearing to me not to differ essentially from the former, I recommended a plan

of treatment to be pursued, not materially varying from what had been successful in that case; and, in a few weeks, I had the satisfaction to find that the tumour had entirely disappeared.

The public is so willing to believe the assertions of some men, that scarcely any extravagance will disabuse its credulity. A nicer observation is required to discriminate between indurated tumours and cancer, than falls to the lot of such practitioners. But, if a man is fortunate enough to make the world believe such cases as the following to be cancer, he may cure a thousand in week, with little trouble to himself, and with a single application of his remedy. It fell under the care of Doctor Ferriar, to whom I am obliged for the communication.

CASE IV.

“ A gentleman called on me some months ago, in great agitation, to request my opinion respecting a hemorrhage, which had taken place from a small tumour near the point of his nose. He informed me, that a few days after the discharge of blood happened, he had shewed the tumour to some empirical practitioners in this neighbourhood, who assured him that it was a *bleeding cancer*; that he was in imminent danger from its continuance; and that he must put

himself, without delay, under their care, and submit to a severe course of caustics. This he determined not to comply with, till he knew from me whether the tumour was of a cancerous nature. I found on examination, that it was merely a pimple, of a larger size than usual, which, in suppurating, had probably opened a small branch of an artery, and procured a considerable discharge of blood that was very salutary to him, as a hemorrhoidal evacuation, to which he had been formerly subject, was then suppressed. I advised him to stay quietly at home, with an assurance that this dreadful cancer would disappear in the course of a very few days; and indeed, in less than a week, no vestige of it could be traced."

It is a fact now generally admitted, that cancer is originally a local complaint; and that the constitution becomes contaminated from that source. When, therefore, a well-marked case of cancer shall occur, the sooner it is extirpated the greater chance there will be of success from the operation.

In discriminating cancer from other diseases resembling it, my sentiments correspond so nearly with those contained in an excellent pamphlet by Mr. Pearson, entitled, "Observations on Cancerous Complaints," that I shall rest satisfied

with referring my reader for information to that work.

Extirpation by the knife is the only method pursued by regular practitioners, as it is unquestionably less painful, and less tedious than caustic, and more safe to the patient.

A late writer has recommended, in the extirpation of the cancerous breast, not to remove any of the skin, unless diseased, how loose and abundant soever it shall be; but, I am convinced, after repeated trials, that the cure is retarded by the practice in such cases; and that it is better to remove a portion of the skin, by a double incision, so as to leave just integument enough to bring the lips of the wound into contact; and to take the chance of uniting by the first intention.

Chirurgical writers inform us, that among the caustic applications used by empirical practitioners, their choice has fallen very generally on arsenical preparations.

Theodoric, first recommended arsenic, and applied it as a caustic in many different diseases besides cancer;* and it continued to be used by

* *Mortificetur cancer cum arsenico, secundum doctrinam*

practitioners for several centuries, as we are informed by Hildanus, to the great detriment of their patients.

Hildanus, feelingly laments the mischief done in his time by arsenical caustics; for, he tells us, that the basis of the celebrated cancer-powder of Penot and Muller, and the cancer-remedies of Fedron and others, was arsenic; all of which were much used in the latter end of the sixteenth, and in the beginning of the seventeenth century.*

Hildanus, himself used an ointment of arsenic, in the cancerous, and in other foul ulcers; but, he never applied more at one time than contained from a grain to scarcely a grain and a half of that mineral. When applied in a larger quantity, he says that, nausea, dislike of food, eructations, delirium, faintings, and even death ensued.

Fabricius ab Aquapendente, gives the formula of an empirical cancer-caustic, the active ingredient in which is arsenic; which he had known

nostram, sublimato; prima enim die fistulam, cancrum, herpetem, esthiomenum sive lupum, noli me tangere seu formicem, et omnes similes morbos, occidit. Theodorici, Lib. 3. cap. 6. pag. 116.

* Hildan. obs. 81. pag. 608.

successful in the cure of cancer in the lip, and in other parts of the body.*

The basis of the highly celebrated caustic of Plunket, consisted of arsenic; which, blended with sulphur, crowfoot, and dog's fennel, formed an admixture of substances, evidently intended to diminish the virulence of the mineral poison.

I have applied a solution of arsenic to the cancerous ulcer, and have found that it speedily destroyed the surface, converting it into a black eschar; but it leaves the parts underneath in a state less disposed to heal, than any other caustic I have tried.

When a genuine cancer shall have proceeded from the occult to the open state; and the neighbouring glands shall become contaminated with the cancerous poison; the disease, I believe, will always prove fatal.

The insufficiency of the different reputed specifics to check its ravages, is too fatally experienced; and the miserable existence of the patient is dragged on, with such intervals of ease

* Fab. ab Aquapend. cap. 22. pag. 118.

as can be procured by opium producing stupefaction, to its final close.

In my trials of the different remedies recommended, I was, of course, led to the internal use of arsenic, which has been considered by some as a specific in cancer.

Mr. Le Februe tells us, that he had used it as a topical application, and given it internally, in milk and syrup of poppies, in more than two hundred cases, with success; and without any bad effects.

Mr. Justamond was of opinion that arsenic is a specific in cancer; but, from his experience, which has been confirmed by others in our own country, such disagreeable paralytic symptoms were excited by its external application, as to occasion it to be relinquished; and, when taken internally, in such small doses as not to prove mortal, tremors, palsies, and lingering hectics, have been said to succeed. I had, therefore, little expectation of any benefit from this remedy; and was chiefly solicitous, in my trials of it, to guard my patient, by a vigilant attention, from its deleterious effects. The result, however, has been more favourable than the experience of

others led me to expect ; which the case subjoined will testify ; the only one in which I have yet had an opportunity of fairly trying it.

Grace Graham, aged forty-five years, a widow, and mother of two children, had been subject to frequent attacks of acute rheumatism, from which she recovered in the usual way. About Christmas 1795, she perceived a small indolent tumour in her left breast ; which continued increasing in size for twelve months, without giving her any pain. Soon after this time, it grew painful ; and increased in size more rapidly than before. The rheumatism becoming troublesome again, in the spring 1797, she became an in-patient of the Infirmary, under the care of one of the physicians. She was relieved of her rheumatic complaints, but the cancer went on increasing. In July 1797, she was admitted under my care as an out-patient ; at which time, the glandular part of the breast was nearly consumed by the cancer ; and the lymphatics in the course of, and the glands in the axilla, were enlarged and very much indurated ; the skin originally covering the breast was in many parts destroyed, exposing a foul ulcerated surface, with here and there an intersection of remaining skin ; and the whole remaining mass was become firmly adherent to the pectoral muscle and ribs. The lym-

phatic glands in the neck were also very much indurated; and hard knots were scattered round the breast, towards the sternum and the clavicle on the same side. The pain was almost incessant, of a burning lancinating kind; and a filthy, offensive, sanious fluid, was copiously discharged. She enjoyed little sleep, suffered a loss of appetite, and had the *lead*en hue strongly marked in her countenance.

Several courses of different remedies were tried, with no more than temporary relief from pain; and the disease continued its ravages, affecting the whole of the lymphatics of the left arm with pain and enlargement.*

She was admitted an in-patient under these circumstances; and, without any hope or prospect of doing her service, I put her on a course of arsenic, on the 5th of June 1798, by directing her to take twelve drops of the mineral solution of Doctor Fowler, three times a day. Large and repeated doses of opium had been found necessary, to procure some ease from her sufferings; which were still continued. The solution, at first, excited considerable general disorder, and great uneasiness in her stomach and bowels, without shewing the least effect on the cancerous

* Ferriar's Med. histor. and reflect. vol. 3. pag. 128.

complaint. In five or six weeks, however, the pain abated ; the discharge was less fetid, and of a better consistency ; and several insulated points of cicatrization appeared in different parts of the ulcerated surface. She was now so easy, that opium seemed to be no longer necessary, and it was discontinued.

I was encouraged to go on, by this favourable change ; and, as the points of skinning increased in number, although the parts that had not yet suffered ulceration continued to be slowly destroyed, I was disposed to think that, if the constitution could bear an increased dose of the solution, a cure might possibly be effected ; and, under this idea, I ventured to give her fifteen drops, three times a day. The consequences soon convinced me that I was mistaken ; for not only an alarming general indisposition followed ; but, the ulcer became painful, foul, and fetid ; and the ulceration of the cicatrized parts was rapidly renewed. These threatening symptoms subsided, however, on leaving it off for a few days, and she then returned to the former dose.

This quantity she has taken daily to the present time, with the exception of an interval of five or six days, during a slight pneumonic affection ; and again, during an attack of cholera

morbus, which lasted for several days; neither of which complaints seemed to have the smallest connexion, either with the cancerous affection, or the taking of the arsenical solution. For several months past she has been *pretty easy*, to use her own words, the discharge has not been at all offensive; the cicatrization has gone on in a manner beyond all expectation; and the diseased glands in the neck have diminished in size, and become free from pain. Many of the small scattered knots have been cast out, leaving a small ulcer at the bottom, exquisitely tender to the touch, but soon healing; and the chief source of what pain she has suffered for some time. The only external application she has used is hemlock; first in the form of poultice, and then by lint moistened in an infusion of the herb. The use of hemlock can throw no ambiguity on the case; as she had gone through a complete course of it, both internally and externally, before she took the solution; with merely a temporary abatement of the symptoms.

Great and surprising as the relief afforded by the arsenic has been, I am not so sanguine as to expect the cure of a *genuine* confirmed cancer; but, the woman's life has undoubtedly been prolonged by it; she has been kept almost free from pain; and in a condition not wholly unfit for enjoying

the comforts of life ; which, contrasted with the usual scene attending the termination of cancer, will render it a valuable acquisition in medical practice. Her spirits latterly have been sufficiently good ; and she has nearly lost the *lead*en hue in her countenance. A generous diet has been allowed, with four ounces of wine daily. The drops have been taken in a tea-cup full of water, or in a little tea.

I am sensible that one case, and that yet under treatment, will not warrant the recommendation of any remedy ; but, the benefit it has afforded this woman, so far exceeds what has been given by any other, in this painful and hopeless disorder ; I should feel wanting in the duty I owe to the public and the profession, were I to delay recalling the attention of practitioners to its employment. None of the inconveniences said to result from the continued use of arsenic have arisen in the present case ; and which occasioned it to be thrown out of practice. Should it be found to act as an ANODYNE only, in such doses as I have administered it, (an intention with which I believe it has never yet been given in this disease) while the constitution is worn out ; and, being free from the objections which apply to opium and other narcotics, it must be ad-


mitted to be possessed of powers capable of alleviating one of the greatest scourges connected with mortality ; and this, I conceive to have been fully proved in the present case.



EXPERIMENTS

on the

Supposed Origin of the Cow-pox.



THE attention of professional men has lately been drawn to the consideration of a disease called the cow-pox, a subject of great novelty in pathology; and promising, in its consequences, important benefits to mankind.

Doctor Jenner informs us, that the disease has been long known in Gloucestershire, among cows; that it may be communicated from them to the human subject; and, that those who undergo it, are rendered unsusceptible of the small-pox. His facts fully prove the position he has

laid down ; which is also confirmed, by the opinion entertained by the common people of that county.

Since Doctor Jenner's publication, Doctor Pearson of London has collected a good deal of evidence relative to this disease ; which, it appears, is prevalent in some other counties ; but the result of his inquiry does not exactly correspond with Doctor Jenner's experience, as the small-pox has, in some instances, attacked those who have had the cow-pox.

As the autumnal season for inoculation at our Infirmary was approaching, when I read Doctor Jenner's book, I was solicitous to ascertain the fact ; and, if my experiments confirmed it, immediately to extend the benefits of inoculation for the cow-pox, among the inhabitants of this town.

I therefore wrote to Doctor Jenner, requesting him to favour me with some of the cow-pox matter ; but the disease not having appeared in his neighbourhood for some time, he was unable to supply me.

It has been generally understood, that the eruptive diseases of brute animals are not com-

municable to man, and *vice versa* ; and consequently, that the generation of the poison of the cow-pox, in a disease of the horse called the *grease* ; and its subsequent maturation in the teat of the cow ; before it be fit to excite the specific action in the human subject ; opens a new field of inquiry to the mind of the medical philosopher.

This source of the poison, however, it must be observed, is conjectural ; and, Doctor Jenner, not having had an opportunity of trying it himself, with the liberality of a man of science, suggested several points in his answer claiming attention, in the prosecution of my inquiries for that purpose.

I determined to ascertain it ; and, with the assistance of a veterinary surgeon to enable me to procure the *erysipelatous* fluid in its proper state, I instituted a course of experiments.

The fluid used in the three following experiments, which was thin and of a yellowish colour, was taken from the inflamed heel of a horse, a few hours after the disease had taken place, and before any dressing had been applied.

Oct. 29 ——— æt. 2 years ; ———
æt. 6 months ; and ——— æt. 3 months,

all fine healthy looking children, were inoculated with the above fluid, by making four punctures in the left arm of each, at a little distance from each other.

Nov. 1. There appeared just as much inflammation on the edges of the punctures, as might be expected from the scratch of a clean lancet.

The cooling regimen was enjoined, but no medicine was given.

5. All the punctures were quite well: and the skin had recovered its former complexion.

Variolous matter was inserted to-day, very much diluted with warm water, by making one single puncture in the arm of each, and in the centre of the former.

8. They all had evidently taken the infection.

The disease went through its usual course, in its mildest form.

The fluid used in the following experiments was taken from the heel of a horse, in a high state of inflammation, and discharging copiously a

brownish coloured ichorous fluid. The first symptom of the disease had shewn itself scarcely six-and-thirty hours, and the discharge not more than twenty-four hours, and, as he was reserved for my use, no dressing had been applied.

Nov. 16. With this fluid I inoculated three cows, by making a puncture in each teat; and, the cuticle covering them being thicker than in the warmer months, I took particular pains in inserting it.

For several days, traces of the punctures were discernible; and then they disappeared, without having excited the least sign of disease.

At the same time, I inoculated two cows of the same herd with variolous matter, by making a puncture in each teat; but there occurred no perceptible change.

With a part of the same ichorous fluid three children were inoculated, by making four punctures in the left arm of each; but neither inflammation, nor disease of any kind, ensued.

If the disease called cow-pox will free the constitution of those who undergo it, from receiving, ever after, the infection of the small pox;

it is reasonable to infer, that the poison of both is identical. It is a fact well-ascertained, that the small-pox may be communicated, either by the erysipelatous fluid, obtained from the inoculated part, before the eruptive fever comes on ; or in the form of pus, taken at the period of complete maturation : or even by the scab of the dried pustule, in the last stage of the complaint.

The limitation of the contagious power of the fluid supposed to occasion the cow-pox, and obtained from the horse's heel, to the first or erysipelatous stage of the grease, disproves the identity ; and also destroys any analogy, that might have been conceived to subsist between it and variolous matter.

Twelve punctures were made in the teats of the three cows inoculated with the *ichorous* fluid, and it did not produce the smallest effect in either of them : six children were inoculated with the same sort of fluid, by making four punctures in the left arm of each ; and no disease whatever ensued ; eight punctures were made in the teats of two cows, and variolous matter was inserted ; but not the smallest change took place : one single puncture, with diluted variolous matter, gave the small-pox to a child.

The evidence, therefore, is as *one to twenty-four*, in the human subject, between variolous matter, and the discharge from the horse's heel ; as *one to twelve* in cows ; and, between the insertion of variolous matter in man and in cows, as *one to eight*.

I had engaged a herd, consisting of thirty cows, for my experiments ; but it appeared useless to prosecute them farther, unless I could have procured some genuine cow-pox matter.

These experiments prove, first ; that the cow-pox poison does not originate in the horse's heel ; secondly, that cows will not take the small-pox.

The cow-pox is a disease wholly unknown to farmers, both in Cheshire, and in Lancashire ; so that disappointment could not arise from the animals having undergone that disease : and in Cheshire, a large dairy-county, the men are employed indiscriminately in cleaning the horses, and in milking the cows.

THE END.

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